

# WORK ZONE

## REDUCING MISHAPS BY 50%

### The NavAir HAZREC/MISREC Response Process

NavAir provides all the aircraft and weapon systems for the Navy and Marine Corps. Fleet-generated requirements are approved and funded by CNO (N78), and NavAir provides the research, development, and test and evaluation for the acquisition and support of those required systems. Specifically, NavAir provides naval aviation with aircraft, avionics, air-launched weapons, electronic-warfare systems, cruise missiles, unmanned aerial vehicles, launch and arresting gear, training equipment, and all support equipment related to naval air power throughout the life cycle of the programs. To provide these systems, NavAir also must research, design, develop, engineer, test and evaluate, repair, modify and provide direct in-service engineering and logistics support services to the fleet.

NavAir includes four program executive offices (PEOs), Naval Inventory Control Point (NavICP), Naval Aviation Depots (Cherry Point, Jacksonville and North Island), Naval Air Warfare Center Aircraft Division (NAWCAD), Naval Air Warfare Center Weapons Division (NAWCWD), and the Training Systems Division (TSD) in Orlando, Fla. NavAir also acts as the TyCom for squadrons supporting the developmental testing of aircraft and weapons systems for naval aviation.

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**H**ow does a hazard or mishap recommendation (hazrec, misrec) work its way from the initial report, through the endorsing chain, to NavAir? The process begins with your identification of fleet hazards. The Naval Aviation Safety Program instruction (OpNavInst 3750.6R) defines the process the Navy and Marine Corps uses to investigate and report aircraft incidents and mishaps. Hazards are identified in both hazard reports and safety-investigation reports (SIR) as cause factors. The only difference between a hazard identified in a hazrep and one identified in a SIR is when the hazard is detected. If the hazard is detected and reported before it causes a reportable mishap (by far, the preferred method), then the command is required to issue a hazrep to notify

system users of the risk identified and whether it concerns a mechanical, policy or human shortcoming.

As part of the analysis and conclusions contained in a report, the recommended actions are designed to eliminate or, at the very least, mitigate the identified hazard. At times, recommendations may be as simple as briefing the hazard for the sake of awareness and risk mitigation. Other times, the corrective action may be very complicated and costly, such as a redesign or modification of a system or subsystem to completely eliminate the hazard.

Hazards are defined as “routine” or “severe” as part of the risk-assessment process. This process is defined in Appendix B of OpNavInst 3750.6R. Assessing risk combines “hazard severity” and “mishap probability”

to get an overall “risk-assessment code” or RAC. RACs are identified on a numerical scale of 1 to 5, with 1 being the most critical risk and 5 being the least critical.

The endorsement process allows the chain of command in these units to weigh-in and make sure the causal factors and recommendations are defined and addressed accurately to the responsible activity. When the final TyCom in the endorsing chain sends NavAir a recommendation, NavAir accepts it for action. Severe hazards receive priority by NavAir and N78 when allocating resources for corrective actions. All severe hazards require a formal hazard answer from NavAir in the form of a hazrec or misrec response. In these responses, NavAir only addresses those recommendations specifically directed to NavAir, unless the submitting activity happens to fall under the controlling custody of ComNavAirSysCom, such as a test squadron or NADep.

Generally, NavAir provides three parts to each recommendation.

1. Does NavAir *concur* or *non-concur* with the recommendation(s)? For example, the program manager aircraft (PMA) concurs that the recommendation will solve the problem, or does not concur and why.

2. If the PMA concurs, the hazrec and misrec response also will specify corrective action.

3. The hazrec and misrec ends by telling the user the status of the action: Is the action “ongoing” or “completed”? (Generally, if action is “ongoing,” NavAir tries to provide an estimated completion date to the fleet.)

The Naval Safety Center tracks all severe hazards until the corrective actions are completed. Any changes to corrective actions must include notification to the Safety Center. The NavAir aviation-safety office coordinates with the program office, fleet-support team and the NavAir vice commander to provide a formal NavAir response to all hazards identified as severe (RAC 1 and 2).

NavAir usually does not provide a formal hazrec or misrec response for routine hazreps or mishaps (RAC 3 to 5), but this standard does not mean that routine hazards are unimportant. The number of documented occurrences

of a particular problem and the severity of the risk that hazard poses to the fleet are key in the PMAs determines appropriate NavAir response. The PMA continually monitors and evaluates hazards throughout the platform life cycle and takes action as necessary.

Although NavAir isn’t part of the chain of command, they still have the requirement to accept, reject or change the corrective actions directed to NavAir. NavAir also is required to report all status changes on those actions until the action is complete. OpNav 3750R requires NavAir to respond with a hazrec or misrec within 30 days after release from the final endorser. In many cases, the engineering investigation and the engineering solution cannot be completed within 30 days, and that response is delayed. In those cases, NavAir provides a response as soon as possible.

A hazard report or mishap report may identify a particular risk that requires immediate action to prevent loss of life and/or aircraft. As part of the response, NavAir and N78 may redirect existing funds through a safety engineering-change proposal (ECP) from existing programs to mitigate the risk. Other hazards must be corrected through the normal budgeting and acquisition process, referred to as the planning, programming and budgeting system (PPBS).

Well-documented safety deficiencies with identified solutions don’t guarantee correction. The modification of aircraft and/or systems can remain unfunded because of funding shortfalls, legacy systems, and other competing priorities. No special source of funding is available to address “safety” deficiencies. Safety improvements compete with operational improvements for available funding. Normally, the later a change is made in the life cycle of a platform, the greater the cost to effect that change. Improvements to existing or legacy systems compete with new programs for finite dollars.

Priorities for acquisition and the funding associated with them start with the operators. Several forums within the Navy, including the operational-advisory groups (OAGs) and the system-safety working groups (SSWGs) help set

community priorities. SSWGs work to identify material shortcomings, failures, or lack of installed systems that may affect safety of flight or a shortcoming that decreases mission performance. The priorities established in the SSWGs feed into the OAGs. The more the fleet identifies a specific problem, the greater the possibility that it will bring about change.

OAGs establish an overall prioritized system-requirement list for fleet-operator improvements that apply to each community. After the priorities are set, each program office prepares an input to the program-objectives memorandum (POM), based on the requirements of the individual programs. The services set their overall priorities and prepare a POM, documenting fiscal requirements based on input from the fleet and guidance from the defense-planning guide (DPG).

The DPG provides the strategic framework for the Office of the Secretary of Defense (OSD) to implement the national military strategy (NMS). The joint chiefs derive the NMS from the president’s national security strategy (NSS). After the services and agencies submit

their POMs, OSD examines and proposes alternatives to balance the limited funding across DoD to achieve the DPG goals. Programs are prioritized, and those programs that make it through the process receive funding.

This simplified review of the budgeting and acquisition process cannot be dismissed if one is understand how misrecs and hazrecs bring about change.

Each aviation community sets its priorities, and there is no special pot of money designated just for safety.

Improvements begin with the fleet and the identification of hazards. We cannot hope to eliminate mistakes, or ever assume to create the perfect fault-free platform or system, but our goal must be to intervene and identify those hazards before they turn into mishaps.

Your hazrep is necessary and essential for the system to work, and to help your community establish the correct priorities.

Contact the NavAir aviation safety department e-mail at:

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# Mishap-Free Milestones

VAQ-134	25 years	49,385 hours
VAW-121	38 years	74,065.9 hours
VP-4	33 years	213,500 hours
VS-30	25 years	88,000 hours
VFA-34	2 years	9,200 hours
VP-9	26 years	162,000 hours
HS-2	19 years	58,000 hours
HSL-43	2 years	10,000 hours
HS-4	9 years	20,000 hours
VAQ-140	19 years	29,480 hours
VAW-125	36 years	70,000 hours
VRC-40	21 years	95,517 hours
VP-46	41 years	285,000 hours

## HOW ARE WE DOING?

Aviation (Rates = Mishaps Per 100,000 Flight Hours)

Class-A Flight Mishaps (FY05 thru 18 March)

Service	Current Rate	FY04 thru 18 Mar 04	FY05 Goal*	FY02-04 Avg	Fighter/Attack	Helo
USN:	8/1.80	4/0.87	10/0.88	19.7/1.75	4/3.81	4/4.56
USMC:	3/1.96	7/4.91	7/1.94	14.7/3.97	2/3.28	1/1.38

\* Goals based on FY02 baseline.

 rate above goal.

 rate below goal.